

REMARKS

Claims 1-26 are pending. By this response, claims 19, 20, 24 and 25 are amended. Claim 2, 3, 6-8, 10, 11 and 14-16 are allowed. Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

Information Disclosure Statement

In reviewing the application file, the undersigned has noted that the appropriate initialed Form PTO/SB/08 in response to the Information Disclosure Statement (IDS) filed on August 31, 2007 has not been received by Applicant. The Examiner is therefore requested to return a copy of the initialed Form PTO/SB/08 to the undersigned as soon as possible.

Allowable Subject Matter

Applicant appreciates the Examiner's indication that claims 2, 3, 6-8, 10, 11 and 14-16 are allowed. For at least reasons presented below, Applicant respectfully submits that all claims should be allowable.

Claim Rejections – 35 USC § 112

Claims 20 and 25 stand rejected under 35 USC § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection, insofar as it pertains to the presently pending claims is respectfully traversed.

As stated on page 2 of the Office Action, the Examiner asserts that the features recited in dependent claims 20 and 25 are not consistent with the disclosed embodiment(s). In this Reply, Applicant as amended claim 20 to clarify that the plurality of pixels of the solid-state imaging element include pixels for a first color, pixels for a second color and pixels for a third color, wherein the plurality of pixels includes sub-pixels for the first color, sub-pixels for the second

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color, and sub-pixels for the third color, the first, second and third colors being different from each other. Dependent claim 25 has been similarly amended. Applicant submits that this amended claim language is entirely consistent with disclosed aspects of the present invention, e.g., as illustrated in Fig. 2, and respectfully requests that the rejection under 35 USC § 112, second paragraph be reconsidered and withdrawn.

Claim Rejections – 35 USC § 103

Claims 1, 4-5, 9, 12, 13, 17, and 22 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Fossum et al. (USP 6,137,100) in view of Murakami (JP Pub. No. 06-178198). Claims 19-20 and 24-25 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Fossum and Murakami, further in view of Yamashita et al. (USP 6,750,437). Claims 18 and 23 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Fossum and Murakami; further in view of Inai et al. (USP 4,437,111). Claims 21 and 26 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Fossum in view of Murakami, Yamashita and Inai. These rejections are respectfully traversed.

Independent claim 1 instructed to a digital camera comprising: a diaphragm, which controls an amount of incident light by varying a stop-amount; a solid-state imaging element; and a controller. The solid-state imaging element receives the incident light passed through the diaphragm and has a plurality of pixels, each of the pixels being divided into a main pixel, which has a first area for obtaining a high-sensitivity image signal, and a sub-pixel, which has a second area which is smaller than the first area, for obtaining a low-sensitivity image signal. The controller individually controls a gain amount of the high-sensitivity image signal including plural color components and a gain amount of the low-sensitivity image signal including the plural color components in response to the stop-amount of the diaphragm. The digital camera of claim 1 further comprises a synthesizing processor, which synthesizes the controlled high-sensitivity image signal and the controlled low-sensitivity image signal.

As discussed previously, for example in the Reply dated November 17, 2005, Fossum discloses a technique that adjusts for different color sensitivities of an image sensor by utilizing a color filter pattern having areas that are sized to account for the different color sensitivities. For example, a blue area 110 of the color filter pattern is made larger than the red area 116 as shown in Fig. 1B. Thus, the larger size area 110 compensates for the lowest color sensitivity of the image sensor. See also col. 2, lines 38-44 of Fossum. Fossum fails to disclose high-sensitivity pixels and a low-sensitivity pixels for the same color and individually controlling the gain amount of the resulting high-sensitivity and low-sensitivity image signals.

Page 4 of the Office Action responds to such reasoning by relying on a secondary reference, Murakami, stating at page 4 that:

Murakami's solid-state image pick up device also includes a controller (fig. 2, ref. 6/9a-9c), which individually controls a gain amount of the high-sensitivity image signal including (along with) plural color components and a gain amount of the low-sensitivity image signal including (along with) plural color components in response to the stop-amount of the diaphragm (abstract, paragraph 9). (Emphasis Added)

Applicant respectfully submits that the Examiner has misinterpreted the teachings of Murakami, particularly cited paragraph [0009]. Murakami fails to disclose a high-sensitivity image signal including plural color components and a low-sensitivity image signal including the same plural color components. Applicant has attached an English translation of the cited paragraph [0009] of Murakami. Paragraph [0009] of Murakami fails to disclose or suggest including both high-sensitivity pixels and low-sensitivity pixels for the same color and individually controlling a gain amount of the resulting high-sensitivity and low-sensitivity image signals.

For at least this reason, Applicant respectfully submits that the asserted combination of Fossum and Murakami (assuming these references may be combined, which Applicant does not admit) fails to establish *prima facie* obviousness of claim 1 or any claim depending therefrom. Furthermore, the Examiner's reliance on Yamashita and Inai as additional secondary references

fails to makeup for the deficiencies of the asserted Fossum-Murakami combination. Independent claims 9, 19 and 24, as well as claims depending therefrom, define over the asserted prior art based on similar reasoning to that set-forth above with respect to claim 1.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejections under 35 USC § 103.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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Attachment: Appendix (English Translation of Paragraph 0009 of Murakami)